

Overview of Methods of Calculation

	1.0	2.0	3.0	4.0	5.0	6.0	
Addition and subtraction (whole numbers)	▪ use objects to model	▪ use counting & basic number facts	▪ use place value principles	▪ develop written methods	▪ extend to decimals	▪ use efficient algorithms	▪ extend to binary numbers
Multiplication and division (whole numbers)		▪ use objects to model ▪ use skip counting	▪ use repeated addition ▪ build up from known facts (tables)	▪ use fact families ▪ develop written methods ▪ use distributive property	▪ use powers of 10 ▪ extend to decimals	▪ use efficient algorithms	▪ use equal multiplication by 10 to divide by decimals
Addition and subtraction (fractions)			▪ use fraction pieces to model ▪ same denominators	▪ related denominators	▪ use efficient algorithms		
Multiplication and division (fractions)			▪ fraction as operator (e.g. find ‘1/3 of’ by dividing into 3 parts)	▪ use area/ array to model (e.g. find 1/3 of 1/5 by dividing square into 5 rows and 3 columns)	▪ division as multiplication by inverse ▪ use efficient algorithms		
Calculators	▪ support for counting and skip counting	▪ check and extend basic facts	▪ use memory	▪ extend by-hand capability to solve problems with realistic numbers		▪ many graphing, trigonometry & scientific requirements	
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